

ABSTRACT

A method for interconnecting electrical conduits in an underground borehole by means of a self-cleaning downhole electrical connector with a static and a moveable connector part, including installing the static connector part within the borehole such that a central throughbore within the static part provides a passage for fluid and debris passage and for access thereto beneath after retrieval of the moveable connector part; and lowering the moveable connector part on top of the static connector part such that pairs of electrical contacts of the static and moveable connector parts intermesh and fluid and debris is discharged via the central throughbore into the section of the borehole beneath the static connector part.

The connector may be used to connect a wireline retrievable electrical submersible pump (ESP) system to an electrical power supply line which may remain in the borehole when the ESP system is retrieved for inspection, repair or replacement.